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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,187	10/17/2003	Wenbing Yun	0002.0005US1	6651
29127	7590	05/07/2007		
HOUSTON ELISEEVA 4 MILITIA DRIVE, SUITE 4 LEXINGTON, MA 02421			EXAMINER LAVARIAS, ARNEL C	
			ART UNIT 2872	PAPER NUMBER
			MAIL DATE 05/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/688,187	Applicant(s) YUN ET AL.	
	Examiner Arnel C. Lavarias	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24, 31-33 and 35-42 is/are pending in the application.
- 4a) Of the above claim(s) 2-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 21-24, 31-33, 35, 41 and 42 is/are rejected.
- 7) ☒ Claim(s) 36-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments to the specification and abstract of the disclosure in the submission dated 3/8/07 are acknowledged and accepted. In view of these amendments, the objections to the specification in Sections 9-10 of the Office Action dated 1/31/06 are respectfully withdrawn.
2. The amendments to Claims 1, 21-22, 31-33 in the submission dated 3/8/07 are acknowledged and accepted. In view of these amendments, the objections to the claims in Section 11 of the Office Action dated 1/31/06 are respectfully withdrawn.
3. The addition of Claims 35-42 in the submission dated 3/8/07 is acknowledged and accepted.
4. The cancellation of Claims 25-30, 34 in the submission dated 3/8/07 is acknowledged and accepted.

### ***Response to Arguments***

5. Applicants note that copending Application No 10/331108 has recently issued as U.S. Patent No. 7119953. After reviewing the claims for U.S. Patent No. 7119953, the Examiner respectfully withdraws the provisional obviousness-type double patenting rejections in Section 13 of the Office Action dated 1/31/06.
6. Applicant's additional arguments filed 3/8/07 have been fully considered but they are not persuasive.

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7. The Applicants argue that, with respect to Claim 1, as well as Claims 31-34 which depend on Claim 1, Piestrup et al. fails to teach or reasonably suggest forming a first optical element and a zone plate lens on a common substrate. The Examiner respectfully disagrees. Piestrup et al. specifically discloses forming a first optical element and a zone plate lens on a common substrate (See specifically Figure 3A; alternatively, see 24, 42 which are formed on 20 in Figure 12A).
8. The Applicants further argue that, with respect to Claim 21, as well as Claims 22-24 which depend on Claim 21, Piestrup et al. fails to teach or reasonably suggest forming a second optical element on a substrate, with a first optical element, by reference to a fiducial mark. The Examiner respectfully disagrees. It is noted that certain features upon which applicant relies (i.e., formation of the first and second optical elements on a *common* substrate) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
9. Claims 1, 21-24, 31-33, 35, 41-42 are now rejected as follows.

### ***Claim Objections***

10. Claim 42 is objected to because of the following informalities:
- Claim 42, line 1- 'Wherein' should read 'wherein'.
- Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Piestrup et al. (U.S. Patent No. 6269145), of record.

Piestrup et al. discloses a method for fabricating a compound optic for short wavelength radiation (See Abstract; Figures 3A-B; 6-15), the method comprising forming a surface profile by removing material of a substrate to form a surface profile of a first optical element of the compound optic (See Figures 7-9; 42 in Figures 11-12; col. 21, line 34-col. 23, line 48); forming a fiducial mark on the substrate (See 38 in Figure 12A-B); and forming a second optical element of the compound optic by reference to the fiducial mark (See Figures 13-14; col. 26, line 61-col. 27, line 61, wherein the second optical element, which is similar to that of the first optical element, is formed by similar methods for forming the first optical element and is aligned to the first optical element using alignment holes 38 and alignment posts 40). Piestrup et al. additionally discloses the first, second, etc. optical elements being conventional lenses or zone plate lenses (See Figures 3-15; col. 21, line 34-col. 23, line 48); forming an optical port on a backside of the substrate (See for example 20 in Figure 9A-B); and forming the second optical element in the optical port (See 28 in Figure 9A, which discloses the formation of a conventional lens through the optical port).

13. Claims 1, 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Piestrup et al.

Piestrup et al. discloses a method for fabricating a compound optic for short wavelength radiation (See Abstract; Figures 3A-B; 6-15), the method comprising forming a surface profile by removing material of a substrate to form a surface profile of a first optical element of the compound optic (See one of the four disks having holes 38, substrate 20, element 42 in Figure 3A; alternatively, see Figures 7-9; 42 in Figures 11-12; col. 21, line 34-col. 23, line 48); forming a fiducial mark on the substrate (See 38 in Figure 3A, 12A-B); and forming a zone plate lens of the compound optic on the substrate by reference to the fiducial mark (See another of the four disks adjacent to the first disk in Figure 3A; see also Figures 13-14; col. 21, line 34-col. 23, line 48; col. 26, line 61-col. 27, line 61, wherein the second optical element, which is similar to that of the first optical element, is formed by similar methods for forming the first optical element and is aligned to the first optical element using alignment holes 38 and alignment posts 40). Piestrup et al. additionally discloses the first, second, etc. optical elements being conventional lenses or zone plate lenses (See Figures 3-15; col. 21, line 34-col. 23, line 48); forming an optical port on a backside of the substrate (See for example 20 in Figure 9A-B); and forming the second optical element in the optical port (See 28 in Figure 9A, which discloses the formation of a conventional lens through the optical port).

14. Claims 35, 41-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Piestrup et al.

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Piestrup et al. discloses the inventions as set forth above. Piestrup et al. additionally discloses the step of forming the second optical element comprising forming a zone plate lens (See for example Figures 3-15; col. 21, line 34-col. 23, line 48); and the first optical element being a refractive Fresnel optical element (See for example Figures 3-15; col. 21, line 34-col. 23, line 48).

***Allowable Subject Matter***

15. Claims 36-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Arnel C. Lavarias  
Primary Examiner  
Group Art Unit 2872  
4/30/07

  
ARNEL LAVARIAS  
PRIMARY PATENT EXAMINER